

IN THE CLAIMS:

This listing of claims below will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-16 (cancelled)

Claim 17 (currently amended): A fuel cell comprising:

a membrane electrode assembly (MEA);

a source of fresh operating substances;

a bipolar plate having:

an anode-side gas distributor structure for distributing anode reactants,

a cathode-side gas distributor structure for distributing cathode reactants,

a guide passage structure for distributing a cooling medium, wherein at least one of the anode-side gas distributor structure and the cathode-side gas distributor structure is divided into at least a first field and a second field, each of the first and second field having an entry port and an exit port for the reactants, the reactants being depleted in the first field between the entry port and the exit port, and

an inlet port coupled to the source of fresh operating substances and at least one of the exit port of the first field and the entry port of the second field for introducing fresh operating substances into the at least one of the anode-side gas distributor structure and the cathode-side gas distributor structure so that the fresh operating substances mix with the reactants that are depleted in the first field and form a mixture that passes into the second field.

Claim 18 (previously presented): The fuel cell as recited in claim 17, wherein an exit port of the first field is connected to an entry port of the second field.

Claim 19 (canceled).

Claim 20 (previously presented): The fuel cell as recited in claim 17, wherein the operating substances include further reactants.

Claim 21 (previously presented): The fuel cell as recited in claim 17, wherein the first and second fields each include a cooling medium entry port and a cooling medium exit port for the cooling medium.

Claim 22 (previously presented): The fuel cell as recited in claim 21, further comprising at least one cooling medium adjustment device configured to adjust one of a flow rate and a condition of the cooling medium separately for the first and second fields.

Claim 23 (previously presented): The fuel cell as recited in claim 21, wherein the cooling medium exit port of the first field is connected to the cooling medium entry port of the second field.

Claim 24 (previously presented): The fuel cell as recited in claim 17, further comprising at least one reactant adjustment device configured to adjust at least one of a flow rate and a composition of the reactants separately for the first and second fields.

Claim 25 (previously presented): The fuel cell as recited in claim 17, wherein at least one of the first and second fields has a temperature sensor.

Claims 26 to 37 (canceled).

Claim 38 (new): The fuel cell as recited in claim 17, wherein the inlet port is coupled to the exit port of the first field so the reactants that are depleted in the first field enter the inlet port and are mixed with the fresh operating substances in the inlet port.

Claim 39 (new): The fuel cell as recited in claim 38, wherein the at least one of the anode-side gas distributor structure and the cathode-side gas distributor structure includes an active cell surface and the guide inlet port is located outside of the active cell surface.

Claim 40 (new): The fuel cell as recited in claim 17, wherein a stream of the fresh operating substance provided to the inlet port is smaller than a stream of the reactants that is provided to the entry port of the first field.